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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,629	11/10/2003	Tadao Yamaguchi	F-7998	4798
28107	7590	06/02/2005	EXAMINER	
JORDAN AND HAMBURG LLP 122 EAST 42ND STREET SUITE 4000 NEW YORK, NY 10168			LE, DANG D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/705,629

Applicant(s)

YAMAGUCHI ET AL.

Examiner

Dang D. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 April 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 4-15 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 4-15 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

2. Claims 4 and 5 are objected to because of the following informalities: should "radial plane" be changed to – axial plane – at line 4 from bottom of page 8 and also at lines 2-3 of claim 5? Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 4, 5, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiraki et al. (5,793,133).

Regarding claim 4, Shiraki et al. shows an axial air-gap vibration motor, comprising:

- An eccentric rotor comprising:
- A printed wiring board (27) having a first side (bottom, Figure 2) and an opposing second side;

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- A commutator (Figure 7) disposed on a first side and air-core armature connecting lands interconnected with the commutator;
- A bearing (24) mounted in the printed wiring board at a center of rotation of the rotor;
- A first air-core armature coil (3-1) disposed on the second side (Figure 2, top) of the printed wiring board;
- A second air-core armature coil (3-2) disposed at the second side of the printed wiring board and overlapping the first air-core armature coil in an axial direction of the rotor and shifted relative to the first air-core armature in a range of 16 to 60 degrees (about 45 degrees in Figure 6).
- A third air-core armature coil (3-3) disposed at the second side of the printed wiring board and so as to not overlap (Figure 7) the first air-core armature coil and shifted relative to the first air-core armature at least about 120 degrees (an angle spanning from center of 3-1 counter clockwise to center of 3-3 in Figure 7);
- The first, second and third air-core armature coils being eccentrically disposed at the second side of the printed wiring board relative to the center of rotation of the rotor and interconnected with the air-core armature connecting lands; and
- An eccentric weight (5) disposed at the second side of the printed wiring board, eccentric with respect to the center of rotation of the rotor and in a common radial plane with the second air-core armature coil;

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- A housing assembly including a casing (9, Figure 2) and a bracket (10);
- A shaft (20) supported in the housing assembly and rotatably supporting said rotor via said bearing;
- A magnet (15) disposed in the housing assembly so as to define an axial air-gap in conjunction with the first, second and third air-core armature coils, and the first, second and third air-core armature coils having an angle section equal to a pitch angle of magnetization of the magnet (Figure 1); and
- A brush (13a) disposed in the housing assembly engaging the commutator so as to supply current to the first, second and third air-core armature coils.

Regarding claims 5, 14 and 15, it is noted that Shiraki et al. also shows all of the limitations of the claimed invention.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraki et al. in view of Sato et al. (6,608,410).

Regarding claims 6 and 9, Shiraki et al. shows all of the limitations of the claimed invention except for the sintered oil-impregnated bearing.

Sato et al. teaches to use the sintered oil-impregnated bearing for the purpose of reducing friction.

Since Shiraki et al. and Sato et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use sintered oil-impregnated bearing as taught by Sato et al. for the purpose discussed above.

8. Claims 7, 8, and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraki et al. in view of Sato et al. and further in view of Yamaguchi et al. (6,384,498) and Kroy et al. (4,644,202).

Regarding claims 7, 8, and 10-13, the motor of Shiraki et al. modified by Sato et al. includes all of the limitations of the claimed invention with the bracket having a bracket hole and the shaft having a second end disposed in the bracket hole in the step portion except for the casing having a step portion indented with respect to an outer surface of the casing, the shaft having a first end disposed in a hole in the step portion

and welded to the casing from outside the housing assembly and the second end welded to the bracket from outside the housing assembly.

Yamaguchi et al. teaches to form the casing with a step portion for the purpose of supporting the shaft.

Kroy et al. teaches to weld the shaft (26) to the casing (28) for the purpose of retaining the shaft in place.

Since Shiraki et al., Sato et al., Yamaguchi et al., and Kroy et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the casing with a step portion and weld the shaft to the casing as respectively taught by Yamaguchi et al. and Kroy et al. for the purposes discussed above.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Information on How to Contact USPTO***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D. Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

5/28/05

A handwritten signature in black ink, appearing to read 'Dang D. Le'.

**DANG LE  
PRIMARY EXAMINER**